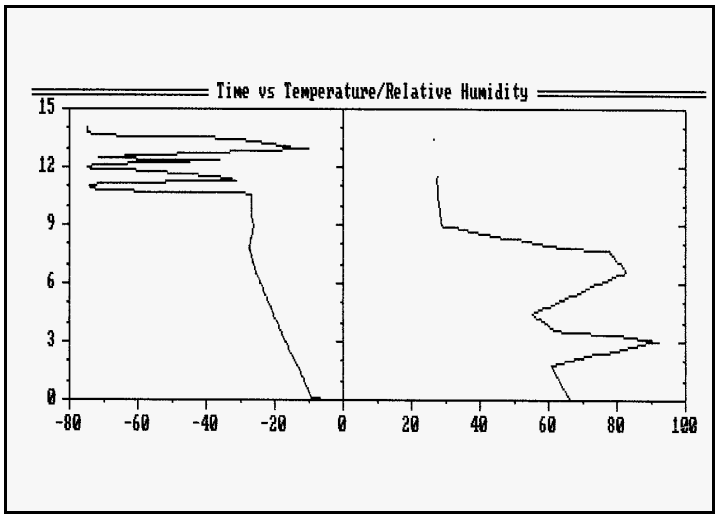
Upper-Air Review Questions for Data Acquisition Course

1. The orientation for the ground equipment is checked:

   A. Once weekly
   B. Before each observation
   C. Every 2 weeks, before the first observation of the day
   D. Once monthly

B VIZ MicroART Training Guide 7.6 and VSL MicroART Training Guide 7.7

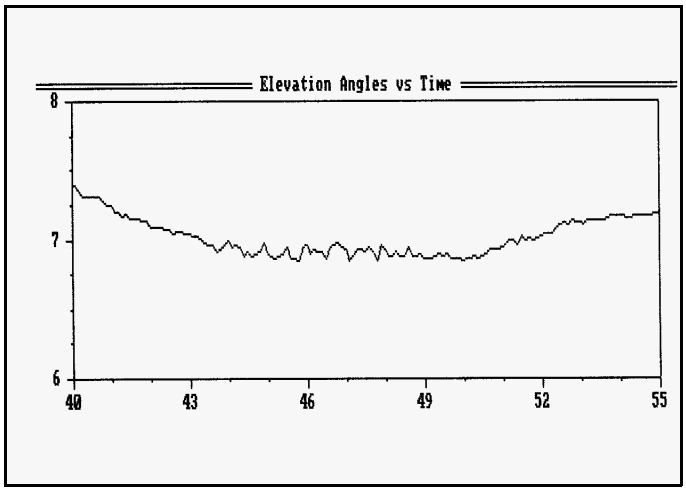
2. If you were to see the following screen display, what would you expect has happened?



   A. Nothing This is Normal Looking Data
   B. Temperature Sensor Failure
   C. Pressure Sensor Failure
   D. Relative Humidity Sensor Failure

B VIZ and VSL MicroART Training Guides 14.2.1.3

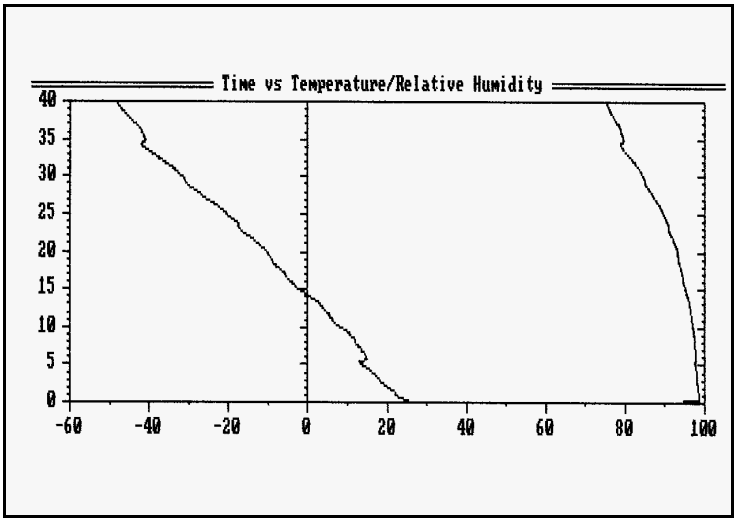
3. If you were to see the following screen display, what would you expect has happened?



A. Erratic Azimuth Angles
B. Erratic Elevation Angles
C. Balloon Burst
D. None of the Above

B VIZ and VSL MicroART Training Guides 14.5.2

4. The following profile indicates what?



A. Failed Temperature Sensor
B. Failed Relative Humidity Sensor
C. Wet-bulb Effect
D. None of the Above

B VIZ and VSL MicroART Training Guides 14.3.1

5. A timed release is the preferred method of release under normal weather conditions because it:

A. Allows automated launch without operator intervention
B. Eliminates possible missing flight data due to the time lag that often occurs from when the observer releases the balloon until when the “Manual Release” button is pressed.
C. Helps eliminate height errors due to start times that may be after the actual release time.
D. Both B and C

D. WSOH-10, Chapter 6, Section 6.13.5

6. A surface observation shall be taken within _____ minutes of release.

A 15
B. 20
C. 10
D. 5

C. WSOH-10, Chapter 6, Section 6.8.2

7. Ground equipment should be turned on at least _____ minutes prior to doing the status check and antenna orientation.

A. 5
B. 10
C. 15
D. 30

C. WSOH-10, Chapter 6, Table 6-1 and Section 6.5

8. Any site located within ____ nm of a controlled airfield must request clearance from the FAA tower. Local agreements that deviate from this policy are not allowed.

A. 10
B. 5
C. 3
D. 15

B. WSOH-10, Chapter 6, Section 6.12.1

9. If a thunderstorm is occurring at release time the observer should:

A. Wait until it passes and if that is not possible do no release
B. Go ahead and release
C. Do not do a flight
D. None of the above

A. WSOH-10, Chapter 6, Section 6.13.3.5

10. What is the maximum number of releases that may be attempted providing authorization has been granted.

A. 2
B. 4
C. 3
D. 1

C. WSOH-10, Chapter 6, Section 6.15.2

11. The general theodolite tests allow a maximum of _____ degree difference in elevation and azimuth from value of surveyed points.

A. .02
B. .1
C. .2
D. .5

C. WSOH-10, Chapter 10, Section 10.3.1

12. An optical comparative is required every _____ unless a ROML states otherwise.

A. 120 days
B. 180 days
C. Once a quarter
D. Once a year

C. WSOH-10, Chapter 10, Section 10.9

13. A Station Inspection Checklist, WS Form B-48 should be completed at least once every_____ by each upper-air site.

A. 6 months
B. 12 months
C. 18 months
D. 24 months

B. WSOH-10, Chapter 11, Section 11.2.1.

14. Limiting angles are no less than _____ degrees elevation. _____ degrees will be added to the sides of any objects except trees. _____ degrees will be added to the elevation of all objects except for trees. Note: Answer is the same for all blanks

A. 10
B. 8
C. 6
D. None of the Above

C. WSOH-10, Chapter 11, Section 11.3.2

15. The Limiting Angle Diagram shall be updated at least once every _____ years or whenever a change is made to the station horizon.

A. 5
B. 3
C. 10
D. None of the Above

A. WSOH-10, Chapter 11, Section 11.3.2.3

16. The theodolite stand should be placed within _____ feet of the RDF tracking equipment.

A. 50
B. 200
C. 300
D. 125

D. WSOH-10, Chapter 11, Section 11.3.4.2

17. Survey points used for orientating the theodolite should normally be within _____ feet of the theodolite.

A. 400
B. 200
C. 1000
D. 800

A. WSOH-10, Chapter 11, Section 11.3.4.2

18. Readings for an optical comparison will not be used for computation until minute 11 and must last at least _____ minutes.

A. 20
B. 60
C. 45
D. 30

D. WSOH-10, Chapter 11, Section 11.3.4.2

19. Reliable readings shall exclude the following elevation angle when taking an optical comparison.

A. Limiting angles and elevation angles 60 degrees or greater
B. Elevation angles of 60 degrees or greater
C. Limiting angles
D. Limiting angles and elevation angles of 80 degrees or greater

A. WSOH-10, Chapter 10, Section 10.9.1.2

20. The inflation building must be:

A. Secured or locked at all times when unattended
B. Secured only at hydrogen sites
C. Never secured
D. None of the Above

A. WSOH-10, Chapter 12.4.1.1

21. At the entrance to the stairwell to the radome or the inflation roof there should be:

A. An “Authorized Personnel Only” sign chained across the stairs
B. A locked gate
C. Either A or B
D. None of the Above

C. WSOH-10, Chapter 12, Section 12.4.1.1

22. A maximum of _____ cylinders are allowed to be stored on site unless approved by the regional or national safety officer.

A. 30
B. 15
C. 60
D. None of the Above

B. WSOH-10, Chapter 12, Section 12.5

23. A qualified technician must check the grounding at least every_____ at hydrogen sites. This check should include the inflation hose, nozzle, inflation table, and frame of the building to ensure each has a resistance of at least 25 ohms.

A. Year
B. 2 years
C. 6 months
D. None of the Above

C. WSOH-10, Chapter 12, Section 12.5 (4)

24. Prior to leaving the office to transport the radiosonde to the release point, the observer should do the following:

A. Position the antenna in the approximate direction the balloon is expected to travel with the elevation adjusted for wind conditions and then place motors in standby
B. Position the antenna in the approximate direction the balloon is expected to travel with the elevation adjusted for wind conditions
C. Leave motors on and adust the antenna's position at the release point
D. None of the Above

A. WSOH-10, Chapter 6, Section 6.10

25. Antenna loading is a condition that causes the frequency of the radiosonde to abruptly increase when the following occurs:

A. When the radiosonde comes in contact with the ground
B. When the radiosonde comes in contact with any solid surface that is metallic
C. When the radiosonde comes in contact with any solid surface that is metallic or non-metallic, with the exception of a thick styrofoam block or possibly a cardboard box
D. When the antenna goes into overload

C. WSOH-10, Chapter 6, Section 6.13 (b)

26. Normal procedure to determine the point of antenna lock-on is to:

A. Estimate the point of lock-on and enter it into MicroART
B. Enter 0.0 into MicroART, then view the positional data to determine when lock-on occurred
C. Always enter 0.0 into MicroART and do not adjust
D. None of the Above

B. WSOH-10, Chapter 7, Section 7.2.2

27. If the antenna elevation is 80 degrees or higher, the observer should:

A. Place the antenna in “Far Auto” to allow the antenna to make angular changes more rapidly
B. Place the antenna in the manual mode and track the balloon manually
C. Place the antenna in “Near Auto” to make angular changes more rapidly
D. None of the Above

C. WSOH-10, Chapter 7, Section 7.3

28. If the observation is terminated by MicroART, the observer should:

A. First look at the data to decide if the reason for termination is correct
B. First look at the data to decide if the reason for termination and the point of termination is correct
C. Do nothing MicroART is programmed to always pick the correct termination reason
D. None of the Above

B. WSOH-10, Chapter 8, Section 8.2.1

29. The observer should always check to ensure no duplicate levels are selected by:

A. Going into levels and checking that no two levels have the same value, if so the last level should be deleted and “Code” run again
B. Going into levels and checking that no two levels have the same value, if so the first level should be deleted and “Code” run again
C. Do nothing allowing MicroART to automatically determine all levels
D. None of the Above

A. WSOH-10, Chapter 8, Section 8.2.1

30. Quality control of all soundings should be done:

A. Prior to dissemination
B. Not required
C. After data dissemination
D. None of the Above

A. WSOH-10, Chapter 9, Section 9.2

31. A communication system is required to ensure the safety of personnel at the inflation building. The system should be operational and:

A. Turned on prior to an individual going out to the inflation building
B. Used anytime inclement weather is expected
C. Used if deemed necessary
D. None of the Above

A. WSOH-10, Chapter 12, Section 12.4.1.1

32. The top of all stairs leading to the radome should have:

A. A foot rail or kick plate to eliminate the potential of personnel possibly slipping off or falling from the stairs during icy or slippery conditions
B. An “Authorized Personnel Only” sign or locked gate
C. None of the Above
D. A theodolite stand.

A. WSOH-10, Chapter 12, Section 12.4.1.1